

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|--|---|
| Applicant's or agent's file reference CFO17988WO | FOR FURTHER ACTION | |
| International application No. PCT/JP2004/004342 | International filing date (day/month/year) 26/03/2004 | (Earliest) Priority Date (day/month/year) 28/03/2003 |
| see Form PCT/ISA/220 as well as, where applicable, item 5 below. | | |
| Applicant CANON KABUSHIKI KAISHA | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.
- 2. **Certain claims were found unsearchable** (See Box II).
- 3. **Unity of invention is lacking** (see Box III).
- 4. With regard to the **title**,
 - the text is approved as submitted by the applicant.
 - the text has been established by this Authority to read as follows:

MICROMECHANICAL POTENTIAL SENSOR

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
 - as suggested by the applicant.
 - as selected by this Authority, because the applicant failed to suggest a figure.
 - as selected by this Authority, because this figure better characterizes the invention.
- b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT**Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)**

A potential sensor (101) including first and second detection electrodes (121 a, b) opposed to an object of which a potential is to be measured, and a movable shutter (125) so positioned between the detection electrodes and the potential-measured object with gaps thereto; wherein the movable shutter can assume a first state and a second state, the first detection electrode is exposed to the potential-measured object wider when the movable shutter assumes the first state than when the movable shutter assumes the second state, and the second detection electrode is exposed to the potential-measured object narrower when the movable shutter assumes the first state than when the movable shutter assumes the second state.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/004342

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01R29/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01R G03G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|---|-----------------------|
| X | RIEHL P.S.: "Microsystems for Electrostatic Sensing" DISSERTATION, 'Online! November 2002 (2002-11), page 1-8, 32-40, 79-84, XP002289224 UNIVERSITY OF CALIFORNIA, BERKELEY Retrieved from the Internet: URL: http://www-bsac.eecs.berkeley.edu/publications/search/send_publication_pdf2c1ient.php?pubID=1040564878 'retrieved on 2004-07-20! abstract; figures 5.1, 5.3 page 79 - page 82 ----- | 1-9 |
| Y | EP 1 003 044 A (XEROX CORP) 24 May 2000 (2000-05-24) page 2, line 1 - page 3, line 41; figure 1 ----- -/ | 1-9 |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

22 July 2004

Date of mailing of the international search report

05/08/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Ernst, M

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/004342

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| Y | DE 27 15 831 A (ELECTRIC POWER RES INST) 19 October 1978 (1978-10-19) page 13, line 28 – page 17, line 27; figures 1,3a,4 page 9, line 10 – page 10, line 24 ----- | 1-9 |
| A | US 2003/057977 A1 (VITURRO R ENRIQUE ET AL) 27 March 2003 (2003-03-27) figures 3,6,1 paragraph '0048! – paragraph '0063! ----- | 1-9 |
| A | HSU C H ET AL: "Micromechanical electrostatic voltmeter" TRANSDUCERS. SAN FRANCISCO, JUNE 24 – 27, 1991, PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON SOLID STATE SENSORS AND ACTUATORS, NEW YORK, IEEE, US, vol. CONF. 6, 24 June 1991 (1991-06-24), pages 659-662, XP010037437 ISBN: 0-87942-585-7 abstract; figures 1-3 ----- | 1 |
| A | DE 100 44 887 A (BUSCHNAKOWSKI STEPHAN) 17 May 2001 (2001-05-17) figure 1 column 1, line 1 – column 2, line 38 ----- | 5-7 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/JP2004/004342

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--|------------------|
| EP 1003044 | A 24-05-2000 | US 6177800 B1 | | 23-01-2001 |
| | | EP 1003044 A2 | | 24-05-2000 |
| | | JP 2000147035 A | | 26-05-2000 |
| DE 2715831 | A 19-10-1978 | DE 2715831 A1 | | 19-10-1978 |
| US 2003057977 | A1 27-03-2003 | NONE | | |
| DE 10044887 | A 17-05-2001 | DE 10044887 A1 | | 17-05-2001 |